

POSITIONING APPARATUS FOR PRECISELY
LOCATING A PART OR OTHER ARTICLE

Abstract of the Disclosure

Horizontal guide rails are mounted on a base and receive linear bearings mounted on the bottom of a tower which carries vertical guide rails receiving linear bearings mounted on a vertical carriage plate. Linear bearings are mounted on the carriage plate and support a horizontal guide rail secured to a horizontal lift arm having an outer end portion supporting a precision locating pin device for a part. Separate gear belts extend around corresponding adjustable idler gears and drive gears and are clamped to the corresponding tower, carriage plate and lift arm. The drive gears are driven by corresponding drive units each including a reversible servo-controlled electric motor, a planetary gear reducer, an absolute resolver unit and an electrically actuated spring set brake. A plurality of the above apparatus are located on opposite sides of a linear part conveyor with the lift arms projecting inwardly in generally opposing relation.